A Network Systems Solution
UNICOM™

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A Network Systems Solution
UNICOM™

Dyna-*Switch*/16
Dyna-*Switch*/24

16 Port or 24 Port
10/100Base-TX Switch

FEP-31016T-1
FEP-31024T-1

USER'S MANUAL

Necessary Cables:	UTP (Unshielded Twisted Pair) Cable	
LED Indicators:	Per Device:	Power
	Per Port:	LINK/ACT, FDX/COL

Performance Specifications

Transmission Method:	Store and forward
MAC address table:	8K-entry MAC address table
Maximum Forwarding Rate: *(64byte packets)*	14,880 pps /10Base-T 148,800 pps /100Base-TX
Maximum Filtering Rate: *(64byte packets)*	14,880 pps /10Base-T 148,800 pps/100Base-TX
Flow control:	Back-pressure (half-duplex) Pause frame (full-duplex)
Duplex mode:	Supports both Half-duplex and Full-duplex mode

Physical & Environmental Specification

Power Supply:	100-240V AC, 50-60Hz Internal universal power supply
Dimensions:	440mm x 161mm x 44mm (LxWxH) 17.6" x 6.44" x 1.76" (LxWxH)
Operating temperature:	0˚C to 45˚C (32˚F to 113˚F)
Storage temperature:	-40˚C to 70˚C (-40˚F to 158˚F)
Humidity:	10% to 90% (non-conditioning)
EMI:	FCC Class A, CE mark
Safety:	UL, cUL

FCC Statement

This equipment has been tested and found to comply with the limits for a class B device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, the user will be required to correct the interference at the user's expense.

Package Contents

Package includes the following:

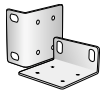
- **Dyna-Switch/16 or 24**
- Rack-mounting brackets
- AC power cord
- Four (4) adhesive-backed rubber feet
- User's manual
- Warranty card

Dyna-Switch/16 or 24

AC power cord

rubber feet

User's Guide



Rack-mounting Brackets

Figure 1. Contents of package.

IMPORTANT: If any piece is missing or damaged, please contact your local dealer or reseller for service.

For Your Records

Product Name: _____

_____

Serial Number: _____

Date of Purchase: _____

Purchased from: _____

Notes: _____

_____

_____

Introduction

The **Dyna-Switch/16** and **Dyna-Switch/24** (Auto MDI/MDIX) are Fast Ethernet switches that provide wire-speed, a Fast Ethernet switching function which allows high-performance, low-cost connections to Full-duplex, Half-duplex, 10Mbps and 100Mbps Ethernet networks. The Switches are targeted at workgroup, department, or backbone computing environments in SME (small, medium enterprise) businesses.

These Switches provides auto-sensing 10/100Mbps Ethernet RJ-45 ports which automatically detect the speed of the device that you plug into them. This switching function allows 10Mbps, 100Mbps, Full-duplex and Half-duplex devices to communicate on the same network without having to replace any infrastructure. This flexible feature allows your network a timely, economical migration to 100Mbps Fast Ethernet.

Key Features

- Automatic MDI/MDIX crossover for all ports
- N-Way Auto-negotiation for 10/100Mbps transmissions
- Store-and-Forward switching architecture
- Auto-detection of full/half-duplex mode in all ports
- Performs non-blocking full wire speed
- 8K-entry MAC address table
- LED indicators for Power, Link/activity, and Full Duplex/Collision
- 19" Rack-mountable with included brackets
- Conforms to IEEE 802.3, 802.3u, and 802.3x standard

For full coverage of your warranty, be sure to register your product using the enclosed registration card.

Troubleshooting

The Switch can be easily monitored through panel indicators to assist in identifying problems. This section describes common problems you may encounter and possible solutions.

■ *Power*

If the power indicator does not light when the power cord is plugged in, you may have a problem with the power outlet or cord. However, if the power LED goes off after running for a while, check for loose power connections, power losses or surges at the power outlet. Turn off power, wait 30 seconds and turn power on again. If problem is still not resolved, call for dealer's assistance.

■ *Cabling*

Verify that the cabling type is correct. Make sure all cable connectors are securely seated in the required ports. Use only standard Unshielded Twisted-Pair (UTP), Category 3, 4, 5, or 5e cables. Use only Category 5 or 5e when connecting with Fast Ethernet. Make certain the maximum distance between the Switch and what it's connected to is 100 meters or less.

NOTE: *Do not plug a standard telephone cord into an RJ-45 port. This may damage the switch.*

Product Specifications

General Specifications

Standard Compliance:	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3x Flow Control and Back-pressure IEEE ANSI/IEEE 802.3 N-way Auto-negotiation	
Protocol	CSMA/CD	
Ports:	10/100Mbps Auto-sensing RJ-45 ports with Auto MDI/MDIX crossover	
Data Transfer Rate:	Ethernet:	10Mbps (half-duplex) 20Mbps (full-duplex)
	Fast Ethernet:	100Mbps (half-duplex) 200Mbps (full-duplex)

Segment Bridge

For enterprise networks where large data broadcasts are constantly processed, these switches are an ideal solution for department users to connect to the corporate backbone.

In the illustration below, two Ethernet switches, with PCs, print servers, and a local server attached, are both connected to a **Dyna-Switch**. All of the devices in this network can communicate with each other through the **Dyna-Switch**. Connecting servers to the switch allows other users to access the server's data.

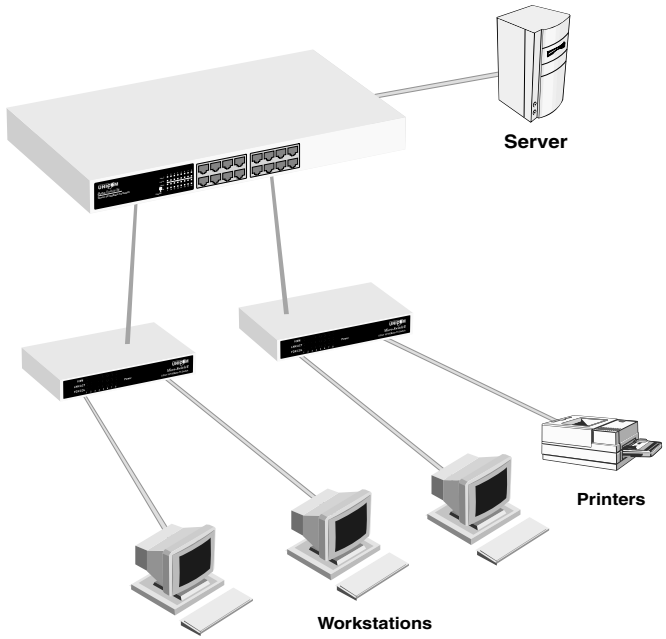


Figure 6. Segment Bridge Application

Hardware Description

The Front Panel

The Front Panels of the **Dyna-Switch/16 and 24** consist of 10/100Base-TX RJ-45 ports and LED Indicators.

Figure 2. Front Panel views of **Dyna-Switch/16 and 24**

The Rear Panel

The 3-pronged power plug is located at the rear panel of the switches as shown in the Figure 3. The Switch operates on AC in the range 100-240V AC, 50-60Hz.

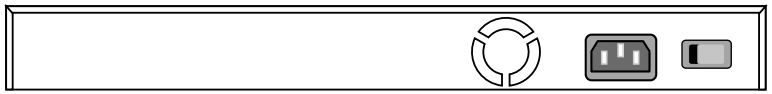


Figure 3. Rear panel view of the **Dyna-Switch/16 and 24**

LED Indicators

The LED Indicators give real-time information of systematic operation status. The following table provides descriptions of the LED status and their meanings.

Per Device:	Power
Per Port:	LINK/ACT (Link/Activity)
	FDX/COL (Full duplex/Collision)

For LED indication details, please refer to page 4.

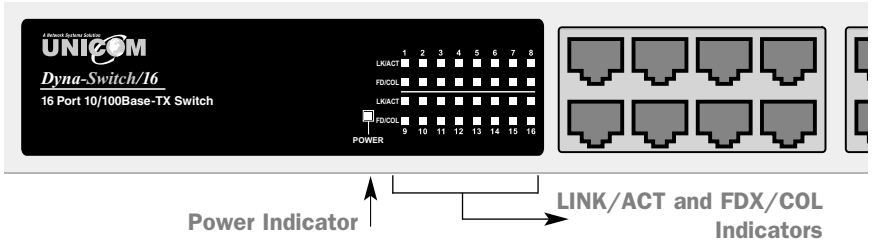


Figure 4. Front panel view of LED indicators

Status LEDs

LED	Status	Color	Description
Power	On	Green	The switch is supplied with suitable power.
LINK/ACT	On	Green	The port is connecting with the device.
	Blinks		The port is receiving or transmitting data.
	Off		The port is *not* linked successfully with the device.
FDX/COL	On	Orange	The port is operating in Full Duplex mode.
	Blinks		A packet collision occurred at this port.
	Off		No device attached or the port is operating in Half Duplex mode.

Network Application

This section provides a few samples of network topology in which the Switches are used. The **Dyna-Switch/16 and 24** are designed to be used as segment switches. With their large address tables (8K MAC address) and high performance, they are ideal for interconnecting networking segments.
You can use the **Dyna-Switch/16 and 24** to connect PCs, workstations, and servers to each other by connecting these devices directly to a Switch. The switch automatically learns node addresses, which are subsequently used to filter and forward all traffic based on the destination address.

Small Workgroup

The **Dyna-Switch/16 and 24** can be used as standalone switches interconnecting personal computers, servers, and print servers forming a small workgroup.

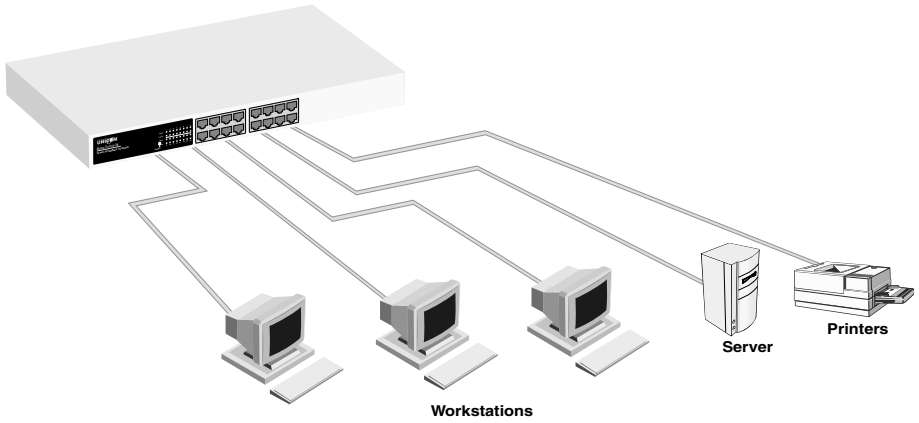


Figure 5. Small Workgroup Application